

Application/Control Number: 09/509,377
Enclosure *L* to Applicant's reply of Sept. 1, 2004

Reply under 37 CFR 1.116 -
EXPEDITED PROCEDURE -
Technology Center 3739

Page 13

I claim:

1. An endoscope, comprising

- o an endoscope tube having a distal part nearest to tube's distal end ,
- o an invaginator of the endoscope tube, which an elastic tube inflated and everted for invagination of the endoscope tube into the explored channel, said elastic tube is gathered by pleats and has an uneverted end,

wherein the improvement comprises an invaginator whose uneverted end is coupled with said distal part of the endoscope tube, at that said invaginator is held on said distal part of the endoscope tube.

2. The endoscope according to claim 1, wherein said invaginator is formed of pleats of said elastic tube, tightly compressed in longitudinal and transverse directions in a compact hollow cylinder, which has a gap with said distal part of the endoscope tube.

3. An endoscope with a disposable cartridge for the invagination of an endoscope tube, comprising

- o an endoscope tube having a distal part nearest to tube's distal end ,
- o an invaginator of the endoscope tube, which is an elastic tube inflated and everted for invagination of the endoscope tube into the explored channel, said elastic tube is gathered by pleats and has an uneverted end,

wherein the improvement comprises an invaginator, whose uneverted end is coupled with said distal part of the endoscope tube, said invaginator is formed of pleats, tightly compressed in longitudinal and transverse directions in a compact hollow cylinder, which has a gap with said distal part of the endoscope tube and is held on said distal part of the endoscope tube.

4. The endoscope according to claim 2 or 3, wherein said cylinder has a narrowings of an external diameter and widenings of its internal diameter.

5. The endoscope according to any of claims 1 to 3, further comprising a shell for conducting the distal part of said endoscope tube with invaginator along rectum, at that the diameter of said shell is commensurate to the diameter of said invaginator.

6. The endoscope according to any of claims 1 to 3, further comprising sliding seals of said endoscope tube isolating a cavity of the everted part of said invaginator.

7. The endoscope according to any of claims 1 to 3, further comprising an anal dilator.

8. The endoscope according to claim 7, wherein said dilator has a channel in its wall.

Application/Control Number: 09/309,377
Enclosure 4 to Applicant's reply of Sept. 1, 2004

Reply under 37 CFR 1.116 -
EXPEDITED PROCEDURE -
Technology Center 3739

Page 14

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9. The endoscope according to any of claims 1 to 3, further comprising a spring of said invaginator.
- 5 10. The endoscope according to any of claims 1 to 3, further comprising a preservative of the distal part of said endoscope tube united with tube's tip, at that the proximal end of preservative and the tip have areas for hermetic fixation to the distal part of said endoscope tube.
- 10 11. The endoscope according to claim 10, wherein said tip comprises a protective glass and communicates with a cavity of intestines.
- 15 12. The endoscope according to any of claims 1 to 3, further comprising a mechanism for introduction of said endoscope tube which is a cylinder-piston unit having a hermetic cavity, confined by a cylinder, a piston and a segment of an elastic tube, connected to fluid pressure.
- 20 13. The endoscope according to any of claims 1 to 3, wherein said endoscope tube has a transverse pleats of its external cover, which are directed inwards.
- 25 14. The endoscope according to any of claims 1 to 3, wherein the endoscope tube has a distal drives of traction lines, bending its distal end, which are springs executed with pitch and enclosed inside elastic tubes connected to fluid pressure.
- 30 15. The endoscope according to any of claims 1 to 3, wherein the endoscope tube has a distal drives of traction lines, bending its distal end, which are cylinder-piston units, connected to the pressure of gas or liquid.
- 35 16. The endoscope according to any of claims 1 to 3, wherein the endoscope tube has a distal drives of traction lines, bending its distal end, which are sylphones connected to fluid pressure.
17. The endoscope according to any of claims 1 to 3, wherein the endoscope tube has a biopsy channel connected to fluid pressure and a biopsy forceps which are a flexible hermetic tube with a biopsy channel piston on tube's distal end.
18. The endoscope according to claim 17, wherein said biopsy forceps have a distal drive of forceps which is a cylinder-piston unit connected to fluid pressure.

Application/Control Number: 09/509,377
Enclosure *4* to Applicant's reply of Sept. 1, 2004.

Reply under 37 CFR 1.116 -
EXPEDITED PROCEDURE -
Technology Center 3739

Page 15

19. The endoscope according to claim 18, wherein said distal drive of forceps is a sylphone connected to fluid pressure.

5 20. A method of prophylaxis from getting infected of an endoscope tube and a patient, wherein the improvement comprises:

- 10 o a hermetic connection of said endoscope tube to preservative of tube's distal part and to a tip united with said preservative, the tip has a protective glass and communicates with intestinal cavity;
- o a hermetic connection of said preservative to the uneverted end of an invaginator of endoscope tube, which is an everted under fluid pressure elastic tube formed by pleats in a compact hollow cylinder which has a gap with said preservative;
- o feeding of fluid pressure through a channel in endoscope tube under the protective glass of said tip.

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